

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

Claim 1 (Currently Amended): Coated tool[[,]] ~~in particular for machining, having said coated~~
tool comprising a substrate[[,]] ~~which has~~ having a predetermined coefficient of thermal
expansion, a first carbon layer which is deposited on the substrate, ~~which~~ said first carbon layer
has a predetermined highly predominant fraction of 80-100% of carbon with a diamond crystal
structure and a coefficient of thermal expansion which is smaller than the coefficient of thermal
expansion of the substrate; and at least one second carbon layer (B), which is deposited and
spaced from ~~further outside with reference to~~ the substrate (M) ~~than~~ by at least the first carbon
layer (A), ~~and in the case of which the~~ wherein said second carbon layer has a fraction of carbon
with a ~~crystal~~ diamond crystal structure ~~is highly predominant which is 80-100%~~ but lower than
the predetermined fraction of carbon with a crystal diamond structure in the first carbon layer
(A), ~~and in the case of which the~~ wherein said second carbon layer has a coefficient of thermal
expansion that is greater than the coefficient of thermal expansion of the first carbon layer, and
said (A), ~~characterized in that the~~ second carbon layer ~~includes~~ consists of nano-crystalline
diamond.

Claim 2. Cancelled.

Claim 3. (Currently Amended) Tool according to Claim 1[[,]] ~~characterized in that~~ wherein the
second carbon layer (B) is deposited directly on the first carbon layer (A).

Claim 4. (Currently Amended) Tool according to Claim 1[[,]] ~~characterized in that formed~~
further comprising an interlayer positioned between the first carbon layer (A) and the second
carbon layer (B) ~~is an interlayer in the case of which, and wherein~~ the fraction of carbon with a
diamond crystal structure drops continuously from the first carbon layer (A) in the direction of
the second carbon layer (B).

Claim 5. (Currently Amended) Tool according to Claim 1[[,]] ~~characterized in that it has an~~
wherein an overall thickness of the first carbon layer (A) and the second carbon layer (B) ~~in the~~
~~range from~~ is about 1 to 40 μm .

Claim 6. (Currently Amended) Tool according to Claim 5[[,]] ~~characterized in that it has an~~
overall thickness of the first carbon layer (A) and the second carbon layer (B) ~~in the range of~~ is
about 4 to 20 μm .

Be Claim 7. (Currently Amended) Tool according to Claim 6[[,]] ~~characterized in that an~~ wherein
the overall thickness of the first carbon layer (A) and of the second carbon layer (B) ~~in the range~~
~~of~~ is about 6 to 15 μm ~~is formed~~.


Claim 8. (Currently Amended) Tool according to Claim 1[[,]] ~~characterized in that~~ wherein the
second carbon layer (B) has a minimum thickness of 0.5 μm .

Claim 9. (Currently Amended) Tool according to ~~one of Claims 8,~~ ~~characterized in that further~~
~~material layers are~~ claim 8 further comprising at least one layer of a material arranged between
the first carbon layer and the second carbon layer.

Claim 10. (Currently Amended) Tool according to Claim 1, ~~characterized in that with reference~~
~~to the substrate beyond the second carbon layer further material~~ further comprising at least one

layer of a material spaced from said substrate by at least said second carbon layer layers are arranged.

Claim 11. (Currently Amended) Process for producing a tool substrate which is coated with carbon and has a predetermined coefficient of thermal expansion, said process comprising the steps of having the following steps:

- a) depositing a first carbon layer onto the tool substrate ~~(M)~~ a first carbon layer (A) ~~[[,]]~~ the and selecting process conditions being selected such that the first carbon layer (A) contains a predetermined highly predominant fraction of carbon with a diamond crystal structure and has a smaller coefficient of thermal expansion than the tool substrate ~~(M)~~; and
-  b) depositing a second carbon layer such that at least said first carbon layer separates said second carbon layer and said substrate (B), which lies further outside with reference to the substrate (M) than the first carbon layer (A) ~~[[,]]~~ the and selecting process conditions being selected in such a way that by contrast with the predetermined fraction of carbon with a diamond crystal structure of the first carbon layer (A) the second carbon layer (B) has a highly predominant but reduced proportion of carbon with a diamond crystal structure relative to the predetermined fraction of carbon with a diamond structure of the first layer, and a larger coefficient of thermal expansion that than the first carbon layer (A) and consists of nano-crystalline diamond.

Claim 12. (Currently Amended) Process according to Claim 11, wherein in which in step a) the process conditions are selected such that the first carbon layer ~~(A)~~ has a high as possible a fraction of carbon with diamond crystal structure.

Claim 13. (Currently Amended) Process according to Claim 11[[,]] wherein ~~in which~~ in step b) the process conditions of step a) are changed to reduce the fraction of carbon with a diamond crystal structure by comparison with the first carbon layer (A).

Claim 14. (Currently Amended) Process according to Claim 12[[,]] wherein ~~in which~~ in step b) the process conditions of step a) are changed to reduce the fraction of carbon with a diamond crystal structure by comparison with the first carbon layer (A).

Claim 15. (Currently Amended) Tool according to Claim 2[[,]] wherein ~~characterized in that~~ the second carbon layer (B) is deposited directly on the first carbon layer (A).

Claim 16. (Currently Amended) Tool according to Claim 2[[,]] ~~characterized in that formed~~ further comprising an interlayer positioned between the first carbon layer (A) and the second carbon layer (B) ~~is an interlayer in the case of which, and wherein~~ the fraction of carbon with a diamond crystal structure drops continuously from the first carbon layer (A) in the direction of the second carbon layer (B).

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Claim 17. (Currently Amended) Tool according to Claim 2[[,]] ~~characterized in that it has an~~ wherein an overall thickness of the first carbon layer (A) and the second carbon layer (B) ~~in the range from~~ is about 1 to 40 μm .

Claim 18. (Currently Amended) Tool according to Claim 3 ~~characterized in that it has an~~ wherein an overall thickness of the first carbon layer (A) and the second carbon layer (B) ~~in the range from~~ is about 1 to 40 μm .

Claim 19. (Currently Amended) Tool according to Claim 2[[,]] ~~characterized in that~~ wherein the second carbon layer (B) has a minimum thickness of 0.5 μm .

Claim 20. (Currently Amended) Tool according to Claim 3[[,]] ~~characterized in that~~ wherein the second carbon (B) has a minimum thickness of 0.5 μm .